type of experiments, but it's pretty exciting for us.

Third thing is, we're working for our city. The city in our case is our utilities provider, so that's who we pay our bill to. And they receive a Department of Commerce grant for doing a telecommunication study for our community. And so we're doing a study right now to check into the feasibility of providing -- of who can provide telecommunication, first of all, what telecommunication services are needed in our community, not just for the city and schools, but medical community, business industries, and so forth, and what alternates do we have.

What's the role of the city? The city could be a provider, the city could be a vendor, the city could also be the one that facilitates the competition that might allow people to come in and use right away to provide those services. So all of that is kind of being worked on right now.

So we're not working on these kinds of things by ourselves. My final comment is, you know, there was one question, and I'm struggling with it here, because I know what you're here for is rates, and as I look at the percentages, I guess

I'm kind of embarrassed to report the kind of percentages we pay.

What we pay for data and voice services -- We don't have to pay anything for the video, that comes from the cable. But for data and voice, voice we pay about 80 -- Let me give it to you. We have a 47 million dollar budget. And data and voice, and the voice is just straight phone and some cellular phone use, that's about the 80,000.

And for data, we -- I lumped in internet, what we paid for our internet provider and frame relay cloud we pay $25,000 a year for the establishment of our frame relay. That's $114,000, which is .2% of the 47 million dollar budget.

So you know, I was trying to put this in perspective, you know, what are we talking about, this is such a small percentage of our budget.

It is really hard even with these amounts, it's really hard to find this 25 -- this 30,000 that we -- and this is new for us, this frame relay that we pay. That basically -- we allocate to the schools $25 per student for them to buy technology. We had to reduce that from 28, so we had to reduce that $3 per student to the

schools, the money that they were using to buy hardware.

And that's how it impact -- because out of my tech budget, it's about 5% of my budget. I don't pay for voice out of my budget, just the data side is 5% of my tech budget. But it is a real struggle. 80 percent of our budget is staff, and we can't touch that. When we do that, we're making our class sizes larger.

Now, I realize in education that's one of the things that's got to be looked at and talked about, but even if our community and educators wanted to do that, and they wouldn't in Richland's case, in Richland's case, the community wouldn't even consider it. That's one of the things they're very proud of, is their class size.

I'll cut it off.

CHAIRMAN NELSON: Thank you, Mr. Bell. Those numbers you gave us will be very useful. So the school district paid for its inside wiring?

MR. BELL: That's right.

CHAIRMAN NELSON: Did you pay -- How did you hire people?

MR. BELL: Went out to bid.

CHAIRMAN NELSON: Okay.

MR. BELL: We had an electrical engineer or architect draw up the bid.

CHAIRMAN NELSON: So did you -- You're not interested in anything like that. You've got your inside wires?

MR. BELL: That's in place, right. We would have been four years ago.

CHAIRMAN NELSON: All right. Thank you.

MR. HEMSTAD: What interaction in your developing program do you have with your local telephone company?

MR. BELL: Well, they were present. I mean, they were always reminding us that, you know, that they were there to serve us. Quite frankly, what was of more use was the independent consultant that we had come in and do that data communication study. They really put things in perspective.

Phone people come in, and they want to sell us more service, more lines, more hand sets. They were more helpful on the data side, in terms of putting that frame relay cloud together. And that's almost sole source there. You have to work

with that. But they -- that's probably a little unfair representation of how they helped us with that. They were very helpful on that.

MR. GILLIS: You must be one of the more sophisticated and more advanced technology schools in the state, wouldn't you be, it sounds like?

MR. BELL: No, I wouldn't. Because you can almost -- what's going on in the school district is more of a function of how much new construction and modernization is going on.

And so there's a lot of the Puget Sound area, because of the growth you've experienced over there, and Vancouver area because of the growth down there. Maybe in Eastern Washington, we could hold ourselves up, but we've only modernized one school and no new school construction. So we've had to do this painfully.

MR. GILLIS: What is the -- Sounds like your program is to wire up all the classrooms in the district. What's the advantage of wiring the immediate classrooms over modular individual classrooms being built that would be utilized for things such as require --

MR. BELL: Would you say the last

part again?

MR. GILLIS: Well, because your program is to put computer access in every classroom in your schools, right?

MR. BELL: Right.

MR. GILLIS: And the only thing I was wondering about is, what is the advantage to your overall program? What are the advantages to wiring every classroom, as opposed to having -- When I went to high school, we had like a business lab and a computer lab, when we went to do those kinds of classes, that's where we went. Not every room had a typewriter and computer and --

MR. BELL: Yeah. Well, they're no longer just -- you know, when the computer first came on, it was enough for them to be stand alone. They were powerful machines just as stand-alones.

But anymore, our people wanting computers, it's not enough just to have a computer. It needs to be connected. They want access to those CD towers that we've got mounted over on the other part of the campus. They want internet access, and they want access to exciting projects like the one I just described, to work with the community. And it's the students too.

It's the teachers and students wanting to do that.

So just stand-alones aren't enough. When you have the infrastructure, it allows you the leverage to -- Put the right kind of infrastructure in place, and it actually allows you to leverage your dollars and pay less to -- for example, what we were doing with GTE for telecommunications service, I paid for a phone line to come into every library, it was an outside line.

Because our phone system was so obsolete, it didn't deal with the world of modems very well. So we had to pay $40 a month for those lines. Well, that got to be very costly, as opposed to one point of access for everybody on the network. That's the kind of leveraging.

MR. GILLIS: Thank you very much.

MS. PALAGYI: Mr. Bell, you and I had an opportunity to talk before the hearing started. I'm wondering if you could just talk a little bit about your -- the bid process or the bid project that you did for your internet service provider and who the competitive providers were. We're interested in that.

MR. BELL: Right. And actually we didn't bid that, but it was something that -- what

we tried to do was identify the major internet providers that were working our area. And all we were looking at was trying to provide internet access for every teacher in the district, every student conceivably, and paying -- and having one access point for the district, and paying one sum for that, not having to pay per account, if you will. . . .

And when we first started talking with vendors, they were all over the place on that. And the thing -- it would have been easy to jump with the person with the lowest bid, but we weren't confident that they could do what we were asking them to do. Band width was our concern and the number of servers they had for the number of users in the area.

So we actually had one vendor that we were more comfortable with, we were more confident that they could provide the services that we were asking for. And incidentally, one of them was our state data processing co-op for the schools, and they've been providing a lot of internet access for schools across the state. But what we heard is students can't get on and teachers can't get on, and again, that's not being able to deliver what

you're paying for.

So we worked with one vendor that brought their cost down 50 percent because they wanted our business that bad. They wanted to be the internet provider for the Richland School District.

CHAIRMAN NELSON: What was the vendor's name?

MR. BELL: One World Communication is the vendor that we ended up going with.

MS. PALAGYI: You also had TCI interested?

MR. BELL: That was when we were putting together -- and that was a different -- but related, but we were trying to figure out, okay, not only did we pull wire to the classroom, but we also this year connected our building. And we were between two vendors. The obvious one was GTE.

And the scenario that they were proposing was frame relay. We had another proposal, and we asked TCI to submit a proposal for doing this with fiber. I mentioned that we're paying $25,000 this year for frame relay. The fiber would have cost -- The fiber services would have cost us $60,000.

We would have liked to have gone with the fiber. We looked at the traffic on our network and we're not there yet. But I mean, that -- what I'm hoping is, we'll get what we get now for $25,000, and then get the band width, the fiber for that or less. $60,000 is real hard to find.

MS. PALAGYI: Thank you.

MR. KING: Thank you, Mr. Bell. The next speaker is Mary Owens. Good afternoon. If you could please introduce yourself.

MS. OWENS: Yes. I'm Mary Owens with Continental Cablevision here in Ellensburg. I don't have a whole lot to tell you because Continental is in transition. We will be being acquired by U. S. West media group, so to speak about the future of cable television in Ellensburg, I can't. But I can give you a history about where we are and what we have done in the past.

Presently we are serving 10 area schools with cable outlets. We have 49 outlets in all. They're all active and going into the libraries and resource rooms in each of the schools. It is part of our franchising group with the city of Ellensburg, and -- but we have gone beyond that and we do provide services to all the

county schools as well, for instance, Kittitas Elementary School, Middle school, and the high school. Seven outlets active in Kittitas High School, five outlets active in the middle and elementary school.

We're in Damman Elementary School which is a very small rural school in the county, and there we have four active outlets. We pretty much have designed the cable systems within the schools to meet whatever the needs are of the school.

Recently Valley View Elementary School was constructed, and we worked with the superintendent of schools and the principal to fulfill their needs of those that are active. We're in the city library, and we try to -- and of course then they do have our full basic service as well and have access to cable in the classroom, Discovery and CNN and any of the other programs that they can draw from for classroom projects.

I'm not sure if you're interested or not, but we are also in the city council chambers county offices, soon to be in the Kittitas 9-1-1 offices as well. So we provide services to those public agencies above and beyond the schools and the library.

Any questions?

CHAIRMAN NELSON: Are these services video services or do you provide data as well?

MS. OWENS: We're only video.

CHAIRMAN NELSON: When -- Well, that's not fair to ask you in a merger.

MS. OWENS: I know nothing. I really don't have any, as I mentioned in the beginning, no information about what the future is for this small rural cable system. We have a subscriber basically of 7500 customers, and that includes the university campus. So you consider -- That's a small cable system when you compare it to what's out in the industry.

CHAIRMAN NELSON: Under the franchise agreement, you make the cable available to the schools, and then are you charging the schools anything --

MS. OWENS: No. There's no fee. No programming charges whatsoever.

CHAIRMAN NELSON: Thank you.

MR. GILLIS: Within the counties -- You serve primarily in Ellensburg?

MS. OWENS: Primarily Ellensburg

and the City of Kittitas and then part of the peripheral area around Ellensburg. We have approximately 1100 customers in the area outside of Ellensburg.

MR. GILLIS: Are there any other cable companies in the county?

MS. OWENS: Yes, they are. Cle Elum is served by TCI. There's a small system in Thorp. So yes, there is a representation.

MR. GILLIS: The customers that are peripheral customers, outside of the town and Ellensburg boundary and Kittitas, are they served by cable or are there substantial gaps?

MS. OWENS: Pardon?

MR. GILLIS: Are there a substantial number of people in the outlying areas that don't have access to cable?

MS. OWENS: Oh, I understand. Yes, there are. Again, as we build out new extensions, we add more of the rural community, but just because of the logistics of it, it isn't unthinkable that they will come to, you know, the outlying areas. And I don't know how much TCI is building out in Cle Elum.

MR. GILLIS: Thank you.

MR. KING: Thank you, Ms. Owens.

MS. OWENS: Thank you.

MR. KING: Are there any other people interested in speaking this afternoon? Yes, sir.

MR. BLOMGREN: Glen Blomgren, executive director of Christa McAuliffe Academy based in Yakima.

I intended to just sit back and kind of observe and try to listen to what this hearing about, but some things have really struck my attention. The comments that this gentleman made here about students center learning is right on track, and we've been doing that for 11 years.

But just this last year, and now this last summer, we started using the internet as a means of communicating with our students, and we now serve students in 31 states on the internet. And so I know we're talking about the huge infrastructure costs and what they have been that Mr. Bell brought up and so on.

It seems to me, why not use technology to bring schools into the private home, rather than bring the students to the schools. We could save a lot of money on building expansion and new

buildings and transportation, avoid the violence and some other safety issues, the time lag involved and those kinds of things and bond issues. So it just seems to me that that's something that might be considered.

Now, I don't know, maybe I could ask some members here, how does this new legislation relate to private schools or does it?

CHAIRMAN NELSON: That's a good question.

MS. PALAGYI: Private schools are eligible for the discount under this program, as long as you don't have an endowment of more than 50 million dollars.

MR. BLOMGREN: Okay, great. That's just all. I wanted to offer those suggestions. We have been testing with students this learning approach, and it's awesome what happens with kids when they have that kind of interaction and doing this type of learning. So that's what I wanted to share with you.

CHAIRMAN NELSON: I can share with you that the western government is thinking along those lines of something called virtual university for lifelong learning purposes, so people in the

their homes could have access to professors from any number of institutions and so on.

MR. BLOMGREN: Well, that's the sort of thing we're tapping into. Just yesterday we had our first nationwide virtual classroom learning session. It was awesome what happened with that.

So if it continues to develop like it has so far, I think it's really going to be, as someone here said, explosive.

Did you have a question?

MR. HEMSTAD: What grade level do you serve?

MR. BLOMGREN: We serve K-12. Primarily -- Most, I'd say 80 percent, of our students right now are high school age, grades 9 through 12.

MR. HEMSTAD: How many students?

MR. BLOMGREN: Just over 200.

MR. HEMSTAD: You mentioned you represent 31 states. You're part of a network that's started across country, or is your school itself providing that?

MR. BLOMGREN: Well, it's kind of a consortium in that way. We're -- I founded the

school 11 years ago, and I've been looking for partners. And you know, we have partners that provide curriculum, some of it is from the University of Illinois and some of it from other places.

But in essence, we have teachers in all parts of the country that serve as mentors for students. And they work directly with them over the internet. So they -- It's just a --

MR. HEMSTAD: But your consortium is made up of other private academies?

MR. BLOMGREN: No. They're all associated branches of our own.

MR. HEMSTAD: I see.

MR. BLOMGREN: Are there any other questions?

CHAIRMAN NELSON: I think I should have asked Mr. Bell this. He gave us some statistics, and the big numbers were doing the inside wires, renovate the buildings, trying to get the inside wiring, whereas the -- his budget impact from what he pays his transmission providers, though, were pretty small.

We're trying to size this problem at the federal level. And the FCC chair was able to

elicit at a hearing in Washington from Bell Atlantic Telephone Company, which serves the East Coast, that to do the inside wiring of every school in the nation would result in an 80 cents per access line charge on the bill.

Do you have any sense of how your parents would respond to that fee being put on the ends of their bills?

MR. BLOMGREN: I'm not sure I'm following. 80 cents per student?

CHAIRMAN NELSON: Per telephone line. So it would be collected from people who pay the telephone bills.

MR. BLOMGREN: Well, my whole pint is why do that. Why not let the parents have their own computer and their own phone line at home and bring the school to them.

I don't think that the rest -- all the people should be subsidizing all of this infrastructure.

CHAIRMAN NELSON: Okay.

MR. KING: There is another gentleman in back who wishes to speak. Yes, sir.

MR. NEWSOME: My name is John Newsome. I'm the director of technology for

Bellevue School District. Actually, we're one of those school districts that Al referred to in the Puget Sound District.

CHAIRMAN NELSON: I'm sorry. You were from where?

MR. NEWSOME: I'm sorry. I'm from the Bellevue School District. You were in our home town on Monday, but I was unfortunately somewhere else, so I came over, had a nice drive over the pass today.

CHAIRMAN NELSON: Okay.

MR. NEWSOME: I want to give you some numbers on infrastructure, and I also want to go back to Mr. Bell's remarks about why we're putting wire in the classroom, and I'd also like to address the last individual who talked about why don't we just use the homes and bring the schools to the homes.

Over the last eight years, we've probably -- and by the year 2000, we will have spent about 30 million dollars on technology and infrastructure. That includes computers and audio/visual equipment, that includes the local area network and wide area network infrastructure, it includes retrofitting 28 schools with AC wiring,

bringing in new circuits, adding additional plugs that are ground and surge protected.

Those are capital costs that we raise through technology levies passed by our community. The average voter passage level has been above 80 percent, so that citizens have been willing to tax themselves for the support of the growth of technology in school districts.

Our annual costs for maintaining our infrastructure, which is a combination of T1, D3, and our own fiber that we put in the ground, we've been in partnership with the City of Bellevue, as they dig up streets and lay conduit, we put fiber in the conduit, so we've been able to leverage some of those digging costs as they've gone along with street improvement, it's about a hundred thousand a year.

It also includes the 20,000 a year we spend with Northwest Net, who is our internet provider. I was curious to hear Al Bell talk about the process for bidding for an internet, because we are now in that state of mind. We upgraded our internet connection from 56K to T1 last year. I know that probably within a year or two, we're going to have to go to D3 to handle the band width,

because of the users in our school.

Something to keep in mind is that we are a medium size school district with about 15,000 students, about 900 or so faculty. With networks into every classroom, library, and office, with about three to five thousand work stations on line, we are a large size company when you think about the technical support issues.

Yet as Al and others have eloquently stated, schools are not funded to support the infrastructure that we're building. And we're building it because the community wants the children to have access to technology when they're in school.

In maybe a semi-facetious comment, why don't we bring the schools to the homes, it's because the homes are only too glad to get rid of their children for six hours a day. Child care is probably the number one reason that public schools exist today. That and athletics, I guess, would be the other key factor.

And so on a not so facetious level, I want to talk a little bit about the community access problem. We are about to form a nonprofit entity with the City of Bellevue, King County

Library, and Bellevue Community College, which is a local two-year college, to form a community access plan, the district host community web page.

And one of the big issues that we wrestle with is not supporting the infrastructure in the school or city or library or college, where public funds are available, but gaining access into the homes for those who can afford it. In one of our high schools, Bellevue High School, about 95% of the homes have computers and about 60% of those homes have internet access. Okay.

Another high school, about 35% of the homes have computers, and probably 5% of the students have internet access. So looking at, you know, the federal government is going to be a hundred percent electronic in its information in the future doesn't surprise me. Paper is expense. But what about the people that don't have access at their home? Where are they going to get it?

The library is one possibility, certainly public schools are going to be another. The idea of why are we building this infrastructure is a really good question. Because it's expensive. It's only worth it if one instruction changes to take advantage of it, and it's only

worth it if the teachers and the students use the access to resources and access to knowledge that exists on the -- on the internet or on the network.

If we took our teachers E Mail accounts away, they would scream, because teaching, until we put networks and telephones in the classroom, was an isolated activity. And by building those networks, we are opening up the classroom, we are encouraging a lot of corroboration and we are bringing knowledge of the 21st century into rooms where sets of encyclopedias dating 1965 and 1955 exist.

So I think it's crucial, if we want a well-educated work force, that the teachers and students have access not only to the knowledge, but also to the habits of mind and the habits of using the technology that are standard in the workplace. Not just as a high school business ed class, but as a way of doing business in the classroom since the time they're kindergartners or in some cases even before.

For ESL students, CD roms that speak in multiple languages, for hard of hearing disabilities that may not allow them to pay

attention to a lecture format, technology offers a broad range, and you certainly multiply the effect greatly when you network the computers together. That pretty much wraps it up.

CHAIRMAN NELSON: Thank you. There's no question that this work is going to go forward as is the policy of this Act. It sounds like Bellevue is one of those very rich places in terms of technology access. It's very interesting to hear about it.

But my political concern I have, and there's some very ambiguous proposals proposed of how to fund this, one includes 1% of all of our communications carriers' revenue, for example. And that would include not only the phone companies, but the cable companies, the wireless companies, and all that sort of thing, which then flows into a national fund, which then flows back out to every place in the nation.

And I'm just wondering how Bellevue parents who have taxed up to this, have taxed themselves, feel about again being taxed to fund a school way far behind, say, in rural Mississippi.

MR. NEWSOME: I think it might depend on how the impact of that tax was delivered

at the school or the district level. One -- I mean, yeah, we're a wealthy district in the sense of capital monies that have been supported by our taxpayers. But none of that money can be spent on support, none of it can be spent on training, none of it can be spent on software. It can only be facility improvements and equipment.

So if part of the rate adjustment monies were also available that could flow back to districts in a support vein -- You know, a company with 50,000 workers that's networked, might have campuses worldwide, probably has a technical support team of at least 40 to 50 individuals. We have five.

And so for us to increase our technical support means increasing class size. I mean, that's the economics of being a school district.

CHAIRMAN NELSON: But again, the statute is pretty clear that this is a telecommunications service, not money to go to training teachers. And I see -- I feel at least, a strong desire in this country to keep local school governments local.

And a federal program that would be, let's say, dictating 80 cents -- 80 cents a line